

TP7000 + RF

7 day programmable room thermostat



GB

Installation Instructions
User Instructions

NL

Installatie handleiding
Instructies voor Gebruik

F

Instructions d'installation
Instructions d'utilisateur

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Installation Instructions



Please Note:

This product should only be installed by a qualified electrician or competent heating installer and should be in accordance with the current edition of the IEEE wiring regulations.

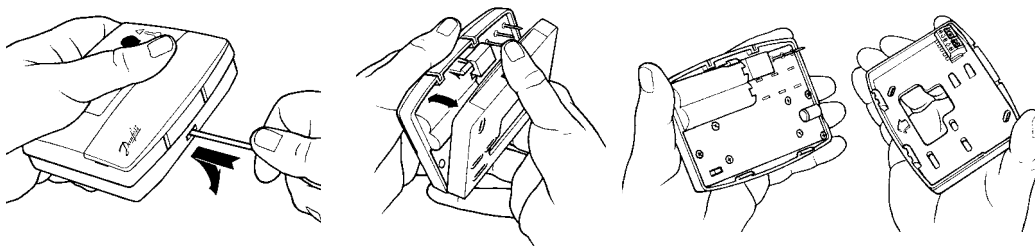
Specification

Thermostat Features	TP7000-RF	TP7000	TP7000M
Power supply	2 x AA/MN1500/LR6 alkaline batteries		230v, 50 Hz
Memory backup	Capacitor during battery change for 1 minute		Rechargeable cell, 24 hrs (*1)
Switching action of output relay	N/A	1 x SPDT, Type 1B	
Switch rating of relay contact, voltage and current	N/A	3(1) A, 230 volts	
Transmitter frequency (RF only)	433.92 MHz	N/A	
Transmitter range (RF only)	30 meters max.	N/A	
Rated Impulse Voltage	N/A	2.5Kv	
Dimensions (mm)	138 wide x 88 high x 28 deep		
Ball Pressure Test	75°C		
Temperature Range	5-30°C		
Design Standard	EN 60730-2-7 (EN300220 for RF)		
Control Pollution Situation	Degree 2		
Time accuracy	± 1 min.		
Temperature accuracy	±1°C		
*1: Unit must powered up for 6 days to charge cell before full back-up is available			

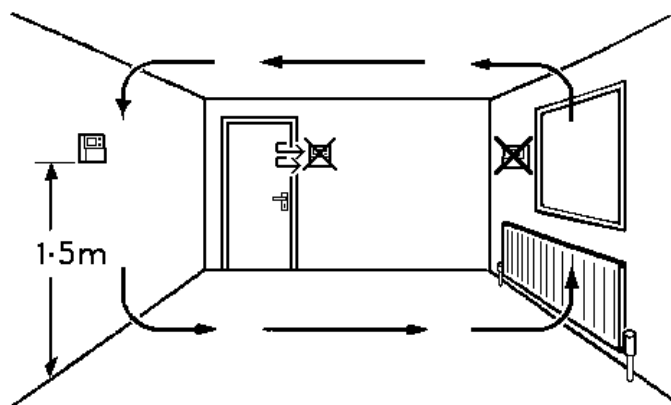
Important note RF products: Ensure that there are no large metal objects, such as boiler cases or other large appliances, in line of sight between the transmitter and receiver as these will prevent communication between thermostat and receiver.

Installation

- First remove the wallplate from the back of the unit



- From the top left hand corner of the wallplate, there must be clearances of at least 140mm to the right, 15mm to the left, 30mm above and 100mm below in order to mount the plug-in module.

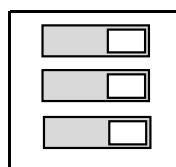


- Before mounting the unit ensure the 4 DIL switches on the rear of the unit have been moved to the required settings (see below). Factory preset is 7-day, with Optimum Start and Chrono-proportional control OFF.

DIL Switch Settings

All models

- Sw¹ 5/2 day programming
Sw² Optimum start controller enabled
Sw³ Chrono-proportional control



- 7 day programming
Optimum start controller disabled
On/Off control

TP7000, M & RF models with 3/6 cycles per hour option

- Sw⁴ Chrono-proportional, 6 cycles / hour



- Chrono-proportional, 3 cycles / hour

NOTE

Use **Chrono 3** for high thermal inertia systems, e.g. floor standing cast iron boilers
Use **Chrono 6** for low thermal inertia systems, e.g. low water content boilers and combi boilers

7-day - each day can be programmed with different times and temperatures.

5/2 day - one set of times & temperatures for weekdays, and another set for weekends.

Optimum start control - function which switches the heating on earlier than the Event 1 programmed time to ensure the required temperature is achieved by the set time.

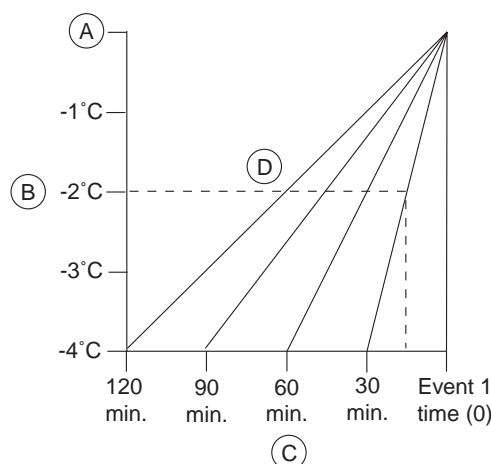
Chrono-proportional control - energy saving feature which fires the boiler at regular intervals to maintain a set temperature, achieving a constant ambient environment for the user.

For a full explanation of all advanced features please visit our website www.danfoss-randall.co.uk or call 01234 364621 to obtain a copy of our Advanced Features Guide.

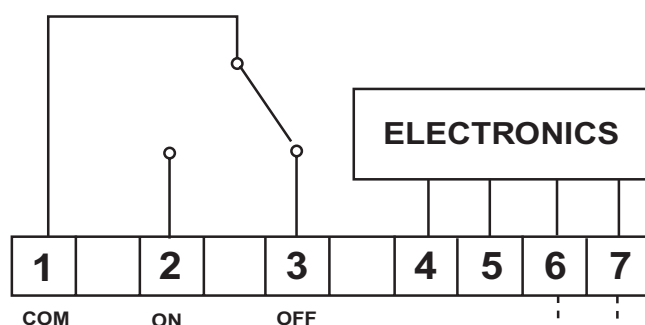
Setting Optimum Start Control

- ☐ Set Sw2 to OSC ON (see DIL settings page 4)
- ☐ Select OPTIMISER CURVE in programming mode

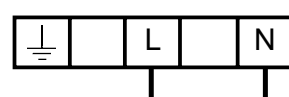
- A** - Event 1 Set Point
- B** - Deviation from Set Point
- C** - Switch On Time prior to Event
- D** - Optimiser Curve Setting



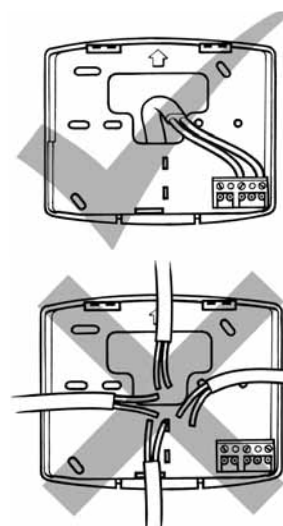
TP7000 Wiring (not RF models)



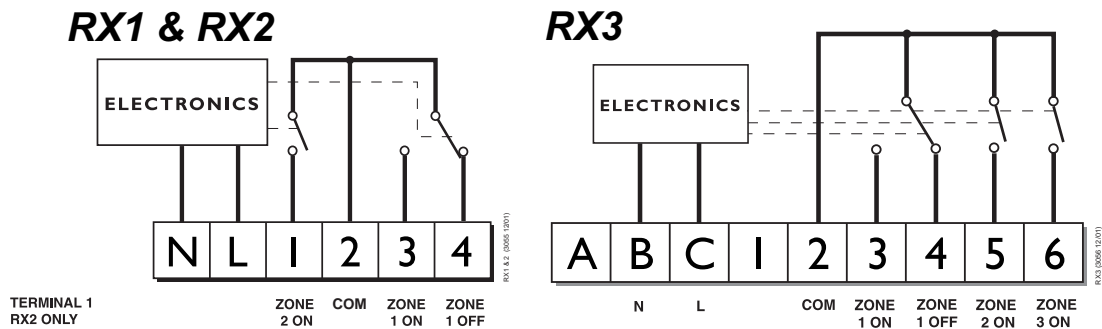
M models only



REMOTE
SENSOR
'A' models
only



Receiver Wiring (RF models only)



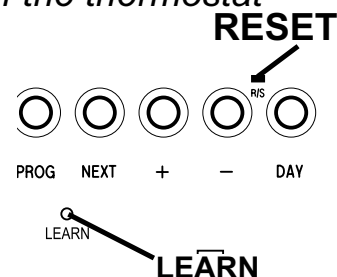
NB. For mains voltage operated systems link terminal 2 to mains live supply

Commissioning (RF versions only)

To tune the RX receiver to the frequency of the thermostat signal, follow steps 1-5 below

1. TP7000-RF

Press the recessed **RESET** button, using a non-metallic object, to reset the unit.

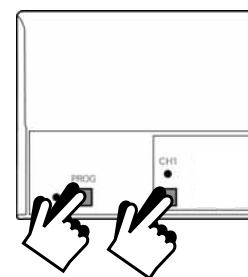


2. Press & hold the recessed **LEARN** button for 3 seconds, using a non-metallic object.

NOTE: Thermostat now transmits continuously for 5 mins

3. RX1

Press and hold buttons **PROG** and **CH1** for 3 seconds until green light flashes once



4. RX2 (if applicable)

Stat 1 - perform steps 1-3

Stat 2 - wait 5 mins, perform steps 1-2 and then press **PROG** and **CH2** on RX2

RX3 (if applicable)

Stat 1 - perform steps 1 – 3

Stat 2 - wait 5 mins, perform steps 1-2 and then press **PROG** and **CH2** on RX3

Stat 3 - wait 5 mins, perform steps 1-2 and then press **PROG** and **CH3** on RX3

5. TP7000-RF

Press **▲** or **▼** to return the unit to normal operation.





User Instructions

Your programmable room thermostat

The TP7000 allows you to programme up to 6 different time and temperature settings for each day of the week, providing complete flexibility. It provides several energy saving features and features several useful user overrides, including a 99 day holiday mode.

Preset Programmes

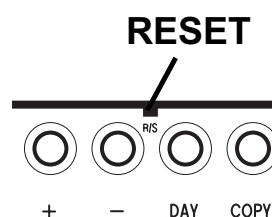
Your TP7000 comes ready programmed with a set of operating times and temperatures which often suit most people.

<i>Weekdays (Mon-Fri)</i>			<i>Weekend (Sat-Sun)</i>		
Event	Time	Temp °C	Event	Time	Temp °C
1	06:30	20	1	07:30	20
2	08:30	15	2	09:30	20
3	11:30	20	3	11:30	20
4	13:30	15	4	13:30	20
5	16:30	21	5	16:30	21
6	22:30	15	6	22:30	15

If you want, you can change any of these settings by following the instructions on pages 9-10. First follow the steps on page 8 to set your display preferences and the correct time and date.

Before you start

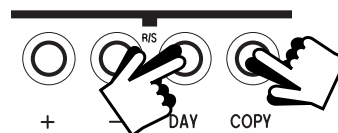
Open the flap on the front of your programmer. Using a non-metallic object, press the recessed RESET button, until you hear a click and the display goes blank.



Display preferences

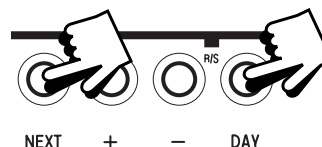
Temperature display (°C or °F)

Press and hold **DAY & COPY** (for 2-3 seconds) until display changes.



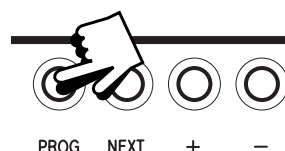
Clock display (12 or 24 hr)

Press and hold **NEXT & DAY** (for 2-3 seconds) until display changes (AM or PM will appear in 12 hr mode)



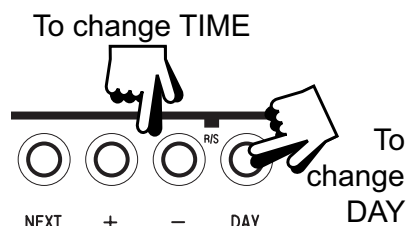
Setting the Clock & Day

Press **PROG** to begin programming



DAY - Press **DAY** until correct day is shown (1=Monday, 2=Tuesday etc)

TIME - Press **+** and **-** to change time (press and hold to change in 10 min increments)



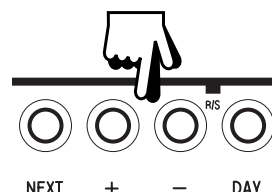
Setting the OSC Period, if enabled (see pg.5)

This display will ONLY appear if the OSC function has been enabled by your installer.



Use the **+** or **-** buttons to select the OSC period. The choices are 0:30 (30 mins), 1:00 (1 hr), 1:30 and 2:00.

The recommended setting is 0:30. If set to 0:00 the function is disabled.



Accepting the preset programmes

If you are happy to use the preset programmes on page 7, you don't need to do anything else. To accept these settings just close the front cover and after 2 minutes the pre-settings will automatically be accepted.

The unit is now in **RUN mode** (colon flashes in display) and the heating will operate according to the preset programmes.

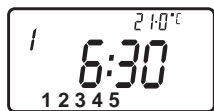


Before you change the preset programmes

Your installer will have set your unit to operate in either **7-day mode** or **5/2 day mode**. To tell which mode your unit is set press **PROG** until Event 1 flashes in the display.



This unit is in **7-day** mode and you can programme different settings for each day of the week (**see page 9-10**).

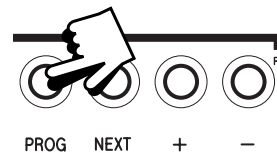


This unit is in **5/2 day** mode and you can enter one of set of programmes for weekdays and another set for weekends (**see page 10**).

Programming in 7-day mode

(separate programmes for each day of the week)

a) Press **PROG** until Event 1 flashes, then press **DAY** to move from current day to Day 1.



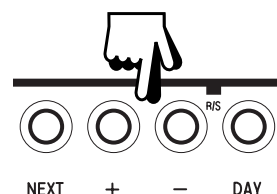
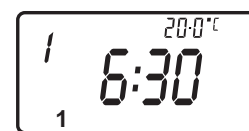
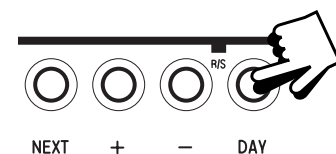
b) Amend the time and temperature as follows:

i) Use **+** and **-** buttons to alter time (press and hold to change in 10 min increments).

ii) Use **▲** and **▼** buttons to alter temperature in 0.5°C (1°F) steps.

iii) Press **NEXT** to advance to next Event

iv) Repeat steps i,ii & iii above for Events 2, 3, 4, 5 & 6

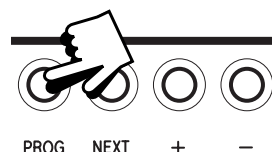
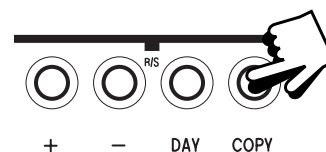
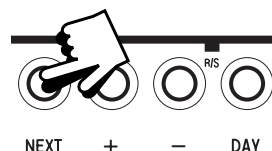


- c) When all 6 events are correct, press **DAY** to programme events for Day 2.

(If you wish to repeat the previous day's programme, simply press **COPY**)

- d) Repeat steps b & c above to programme (or **COPY**) events for Days 3, 4, 5, 6 & 7

Returning to RUN Mode – press **PROG** until colon flashes in display



Programming in 5/2 day mode

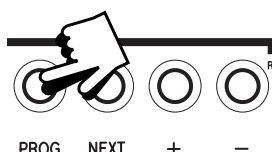
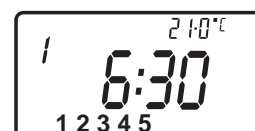
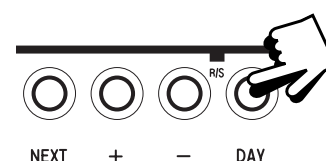
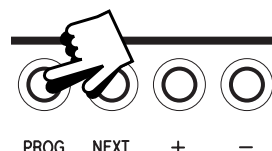
(one set of programmes for weekdays, another set for weekends)

- ❑ Press **PROG** until Event 1 flashes, then press **DAY** until display shows Day 1-5.

- ❑ Follow steps b & c on page 9-10 to programme times & temperatures for weekdays

- ❑ Press **DAY** to programme events for weekend (Day 6-7) or press **COPY** to repeat weekday programme

Returning to RUN Mode – press **PROG** until colon flashes in display



To convert to Thermostat mode

The TP7000 can be converted to control at a constant user selected temperature, instead of following the set programme.

Press & hold **▲ and ▼** together until display changes to colon blinking & default temperature (8°C).



Press **▲ or ▼** to alter temperature as required.

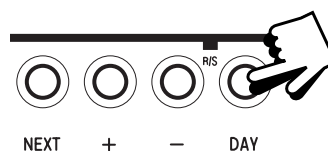


! NOTE: unit will remain in thermostat mode until the **▲ and ▼** buttons are pressed together again.

To programme Holiday Mode (whilst in Thermostat Mode)

The TP7000 can control at a constant low temperature while you are away on holiday, returning to your programmed settings after a specified number of days (maximum 99 days).

(If not already in Thermostat Mode, press & hold **▲ and ▼** together until display changes to colon blinking & 8°C)

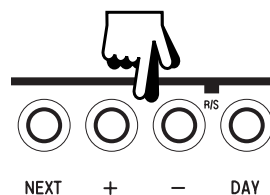


Press **DAY** (display will show a suitcase and :00)

Press **+** and **-** to enter number of days of holiday (max.99)

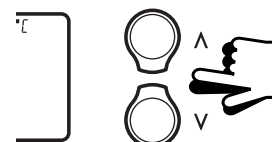


Use **▲ and ▼** buttons to alter the constant temperature, if required.



When selected number of days have elapsed, the unit will return to normal, controlling according to your set programmes.

NOTE: Press **▲ and ▼** buttons together to exit holiday mode if necessary



User Overrides

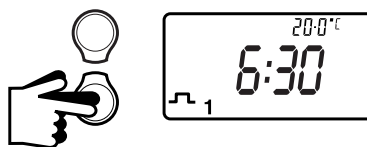
Sometimes you may need to change the way you use your heating temporarily, i.e. due to unusually cold or warm weather. The TP7000 has several user overrides, which can be selected **without affecting the set programmes**.

- ❑ To temporarily increase or decrease the programmed temperature

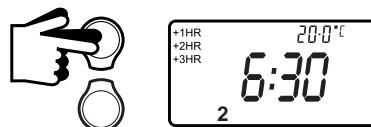
– press ▲ or ▼ to select the desired temperature.



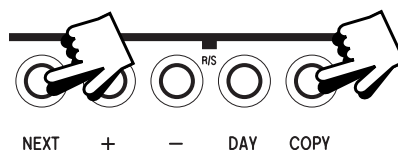
- ❑ Extend Event 1 (i.e. 06.30 20°C) to last all day (so that heating remains on at a constant temperature all day)
- press button once as shown.



- ❑ To extend the current set temperature by 1, 2 or 3 hours
- press button once for 1 extra hour, twice for 2 extra hours, 3 times for 3 extra hours, and press 4 times to remove override.

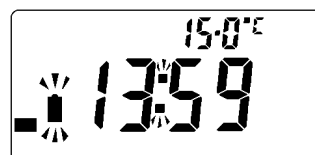


- ❑ To alter main LCD display to show either time or actual room temperature
- press **NEXT & COPY** together.



Changing Batteries (not TP7000M)

Batteries will last in excess of two years. Low battery indicator will flash on the LCD display. The user has 15 days in which to replace the batteries with high quality alkaline cells.



www.danfoss.com/BusinessAreas/Heating

This product complies with the following EC Directives:

Electro-Magnetic Compatibility Directive.

(EMC) (89\336\EEC), (92\31\EEC)

Low Voltage Directive.

(LVD) (73\23\EEC), (93\68\EEC)

